ACM/MIN/90

MINUTES OF THE NINETIETH MEETING OF THE ADVISORY COMMITTEE ON THE MICROBIOLOGICAL SAFETY OF FOOD HELD ON 26 JANUARY 2017 AT 1.00 PM IN AVIATION HOUSE, 125 KINGSWAY, LONDON WC2B 6NH

Present

Chair: Professor Sarah O'Brien

Members: Dr Bob Adak
Dr Gary Barker
Dr Roy Betts
Prof John Coia
Mrs Joy Dobbs
Mrs Emma Hill
Miss Heather Lawson
Dr Gwen Lowe
Mr Alec Kyriakides
Prof Peter McClure
Prof David McDowell
Mr David Nuttall
Dr Dan Tucker

Departmental representative: Mr Steve Wyllie (Defra)

Secretariat: Dr Manisha Upadhyay
Mr Adekunle Adeoye
Ms Sarah Butler

Presenters: Dr Ana Mateus, Dr David Mortimer

Members of the public: see Annex 1.

1. Chair's introduction

1.1 The Chair welcomed members of the committee and members of the public to the 90th meeting of the ACMSF. She also welcomed Dr Ana Mateus who would be presenting agenda item 6 (A systematic review of AMR bacteria in pork, poultry, dairy products, seafood and fresh produce at UK retail level) and Dr David Mortimer (Food Standards Agency, Food Policy) who would be presenting agenda item 8 (Changes to plant protection product and biocide maximum residue levels: potential impact on food safety).

1.2 The Chair also introduced 4 new members of the Committee: Dr Rohini Manuel who had been appointed to the Committee to provide expertise in clinical microbiology; Dr Gwen Lowe who had been appointed to provide expertise in public health medicine; Mrs Emma Hill who had been appointed to provide expertise in commercial catering; and Miss Heather Lawson who had been to provide expertise

in food law enforcement. The new Members and the existing Members said a few words about themselves.

2. Apologies for absence

2.1 Apologies for absence were received from Prof Miren Iturriza-Gómara and Dr Paul Cook.

3. Declarations of interest

3.1 The Chair asked Members if they wished to declare any potential conflicts of interest associated with the agenda items to be discussed. Prof Coia declared that he provided microbiology advice to Tescos and Mr Kyriakides declared that his employer, Sainsburys, sold a number of products that could be discussed during the meeting.

4. Minutes of the last meeting

4.1 The draft minutes of the meeting held on 20 October 2016 were reviewed. An amendment was made to paragraph 7.14 to read: "The Committee agreed that as the link between MAP and Crohn's disease has not been proven" rather than MAP food. The amended minutes would be posted on the ACMSF website.

5. Matters arising

5.1 Paper ACM/1241 summarised the action taken on matters arising from the minutes of previous meetings. This recorded that, since the October meeting, the Newly Emerging Pathogens Working Group had met, discussed, and finalised the risk assessment on Zika virus (attached as information paper ACM/1252).

5.2 The Committee's request to restructure the risk assessment on *Mycobacterium bovis* and the possible health risks associated with meat had been actioned (ACM/1243) and was to be considered at agenda item 7.

6. A systematic review of AMR bacteria in pork, poultry, dairy products, seafood and fresh produce at UK retail level

6.1 Dr Ana Mateus of the Royal Veterinary College gave a presentation on this study, commissioned by the FSA, to assess the prevalence of AMR bacteria in various foods.

6.2 Dr Mateus outlined the objectives and methods used in the systematic review. The scope of the review was literature and scientific studies between 1999 and May 2016, focussing on 4 critically important antimicrobials, as defined by the WHO: β-lactams (including carbapenems), fluoroquinolones, macrolides, and polymyxins (colistin). 304 studies were selected for further study out of a potential 6,000. Only 32 of these 304 had conducted random (probabilistic) sampling so that in most of the studies there was a high risk of bias due to the lack of representative data.

6.3 Dr Mateus summarised the results of the review which showed very limited data was available for most food types from the UK, with the exception of

Campylobacter jejuni in poultry. The review had made many recommendations, mainly concerning the need for more research and surveillance.

6.4 The following points were raised in discussion:

- The review showed that data on AMR in food was in many cases either insufficient or absent, and sample sizes were too small to be meaningful. There was an urgent need for studies with scientific rigour with appropriate sample sizes. There was support for the recommendations in the review for further research and surveillance.
- It was important that comparable data with the rest of the world was collected. There was a suggestion that programmes of research across the whole of Europe were needed in order to better understand the situation of AMR in the food chain.
- There is little data on AMR in pathogens and about the part played by commensals.
- In order to assess the risk, in the context of transmission through food poisoning, it was important to know the levels as well as the presence of AMR bacteria in food and how much AMR there is in our food on a daily basis.
- Surveillance data needs to be focussed so that it can be linked to clinical practice and treatment of patients.
- It was not known how the balance of trade between the EU and third countries would change in the light of exiting the EU.

6.5 The Chair of the AMR Working Group informed Members that the Group had expressed their views to the FSA on the systematic review.

7. *Mycobacterium bovis* and possible health risks associated with meat

7.1 Dr Manisha Upadhyay presented a draft risk assessment in relation to *M. bovis* transmission via meat and meat products (ACM/1243). When considered previously, the ACMSF had classified the risk as “very low”. This draft derived a risk estimation based on EFSA’s risk classification approach that had been adopted by ACMSF since 2012, and proposed the overall risk should be considered as “negligible” with a medium level of uncertainty. It is important to emphasise that the apparent difference in risk is as a result of a different risk level classification approach rather than a change in risk *per se.*

7.2 Members made the following comments on the paper:

- It was suggested that the draft should clarify that the assessment outcome was dependent on existing TB control measures in the UK and that in other parts of the world the situation may be different because of less rigorous control measures.
- The risks from cooked meat would be lower than with raw, rare or cured meat. Members suggested that the risks should be classified separately for cooked and raw meat. (The paper had addressed this by expressing a higher level of uncertainty for less than thoroughly cooked meat.)

- The assessment should stress the importance of the dose/response relationship in the risk characterisation section because the infectious dose is high so it may be possible to identify those that are at higher risk and lower risk.
- Members mentioned that it is not helpful to compare milk and meat in terms of *M. bovis* risk because the foods are very different as are the risk assessments (more milk than meat is consumed by babies and children example).
- In paragraph 27. It was suggested that a definition was given of colony forming units
- Paragraph 12. Insert the word “proportionally” after “while very rare, has become more important for humans”.
- Paragraph 18. The Defra representative offered to provide a link to the Defra statistics for the final version.
- Paragraph 28. Insert APHA after “received a presentation from. . .”
- Defra will provide details of 2 additional goat outbreaks in 2013.
- There was a need to take account of the likelihood of infection being present in skeletal muscle of a meat inspected animal compared to the milk of an animal on the farm, though members acknowledged the risk assessment did draw attention to the likelihood of muscle contamination being low. Anatomical likelihood is important as well as the process of heating/cooking of the food.

7.3 Three Members agreed to stay on at the end of the meeting to help the Secretariat finalise the risk assessment.

8. Changes to plant protection product and biocide MRLs: potential impact on food safety

8.1 Dr David Mortimer (FSA Food Policy) was invited to update the Committee on progress concerning several inter-related negotiations including the amendment of chlorate MRLs (first tabled by the Commission in 2015), the development of a procedure for setting biocide MRLs (under consideration since 2013) and finalisation of the legal definition for endocrine disrupting chemicals (EFSA opinion was published in 2013), all of which could impact on the availability and use of disinfection products for food and feed processes. Dr Mortimer pointed out that the lead government departments on the above subjects were the Department of Environment, Food and Rural Affairs and the Health and Safety Executive.

8.2 ACMSF had been alerted to the issue of changes to MRLs for two quaternary ammonium compounds (QACs), which are used as disinfectants/sanitisers in the food industry, and about negotiations on chlorate (a contaminant in chlorine-based sanitisers) and biocidal actives at previous Committee meetings held October 2015 and January 2016. The Committee had agreed to the FSA’s suggestion to setup a cross Scientific Advisory Committee working group to facilitate a full discussion, although this had been put on hold by the Agency in order to clarify the remit of the working group.

8.3 Concerning the new MRLs that came into force in late 2014 for QACs, members noted that the FSA has not received any reports from the food industry highlighting specific problems arising from restrictions in the use of QACs due to the low MRLs.

8.4 Dr Mortimer reported that the Commission's original proposal for revised chlorate MRLs had attracted a number of comments, notably that they were too low and too complex, but there was no consensus amongst Member States and the Commission had not come back with a fresh proposal. The Committee agreed with the FSA's concerns about the potential impacts on microbiological safety if the use of chlorine-based sanitisers were to be restricted, the difficulties in controlling chlorate levels in potable water used for processing and the possible high rate of non-compliance of a wide range of foods if MRLs were set at too low a level.

8.5 On the Interim Procedure for Setting Biocide MRLs which has been under consideration since 2013, the Committee noted that there have been several revisions to the Commission's proposed procedure. Dr Mortimer explained that, although the Commission favours a proportionate and risk-based approach with MRLs for active substances being established under contaminants regulations, a number of Member States prefer the hazard-based approach in line with that taken for pesticides.

8.6 Following the update the Committee observed that there is not yet a consensus among Member States on the proposal for revised chlorate MRLs, or on the process for setting biocide MRLs and that the EU proposals on criteria for endocrine disruptors are still under discussion. Members agreed with the FSA's concerns about the potential impacts on microbiological safety if the use of disinfection and sanitisation products were to be restricted through setting MRLs at too low a level or by a total ban on the use of certain active substances.

8.7 The Committee agreed to explore the availability of evidence in relation to microbiological food safety that can be employed by the FSA to underpin its position in its negotiation with other Member States and the European Commission. A few members (to be led by Dr Dan Tucker) were asked to meet together to suggest the types of data that would be available that might show that changes are occurring in process hygiene control systems. Members welcomed the opportunity to be involved in any forthcoming FSA stakeholder meeting on this subject, along with the Pesticide Residue in Food (PRIF) Expert Committee. The Committee requested further updates on this issue.

Action: Dr Dan Tucker et al

9. Epidemiology of Foodborne Infections Group (EFIG)

9.1 The Chair invited Dr Manisha Upadhyay to present paper ACM/1245 which summarised the main items from the EFIG meeting which took place on 6 December 2016. This included trends in animal and human data for quarters 1-3 of 2016, an update on the National Control Programmes for *Salmonella* in chickens, an overview of an ongoing Health Protection Scotland study "Estimating the burden of

gastrointestinal disease in Scotland: new opportunities using data linkage" and updates on the *Campylobacter* retail survey and food surveillance in UK.

9.2 Dr Upadhyay reported that provisional data between January and September 2016 reports of *Salmonella* in livestock fell by 10% in comparison to January – September 2015 and by 14% in comparison to January – September 2014. There were four reports of *S*. Enteritidis compared with 13 during January – September 2015 and six during January – September 2014. Reports of *S*. Typhimurium and the monophasic strain *Salmonella* 4,5,12:i:- increased (by 5% and 21% respectively) during January – September 2016 compared with the equivalent period of 2015, but reports of *Salmonella* 4,12:i:- decreased (by 49%). Dr Upadhyay also reported on the top serovars in different species. The most commonly reported phage types of *S*. Typhimurium were DT2, U288 and DT104 which made up 20%, 16% and 15%, respectively, of *S*. Typhimurium reports during January – September 2016. Phage type DT193 was the most commonly reported phage type for both *Salmonella* 4,5,12:i:- and *Salmonella* 4,12:i:- (87% and 92%, respectively).

9.3 Trends in laboratory reports for quarters 1-3 of 2016 revealed:

- 7063 reports of non-typhoidal *Salmonella*, an increase of 5.7% from the 6660 reported in quarters 1-3 2015. An increase in the reporting rate was seen in all constituent countries. The overall number of reported infections increased in the UK by 403, the majority of which (304) were in England. The increase is due partly to an increase in *S*.Typhimurium. It was highlighted that due to a change in laboratory reporting, data for 2015 and 2016 for England and Wales now include untyped *Salmonella* spp.

- Reporting rate for *Campylobacter* has decreased in the UK from 94.2 per 100,000 population in quarters 1-3 of 2015 to 89.1 per 100,000 in quarters 1-3 in 2016. The rate of reported *Campylobacter* infections in England and Scotland have decreased to the lowest rate reported in the last ten years. Wales reported a decrease from quarters 1-3 2015 to 2016, however still reports the highest rate of all UK countries (112.3 per 100,000 population). Northern Ireland continues to report rates lower than the rest of the United Kingdom.

- Changes in relation to STEC O157 incidence were highlighted such as incidence increase in 2016 after a decrease between quarters 1-3 2014 and 2015. Increases were seen in England (64 cases), Scotland (21 cases) and Northern Ireland (25 cases). The reporting rate in Wales is consistent with 2015. It was noted that PHE has applied the Farrington flexible algorithm to the national enhanced surveillance system reported by STEC cases between 2009 and 2015 to detect exceedances in exposures reported by cases. This was presented to the FSA on 18 November 2016 and will complement the existing process of alerting the FSA to outbreaks linked to rare burgers that are reported to PHE. This system will require a period of piloting under the guidance of PHE statisticians and the colleagues at the University of Warwick.

- In quarters 1-3 2016, 31 foodborne outbreaks were reported to eFOSS in England and Wales and to Health Protection Scotland. There were no

foodborne outbreaks reported from Northern Ireland during the period. There were 848 cases (374 of which were laboratory confirmed), and 94 reported hospitalisations.

9.4 From the human data update members noted that the number of human Campylobacteriosis cases appears to continue to be dropping (it has decreased to the lowest rate reported in the last ten years). Wales reports the highest rate of all the UK countries. Members requested that future presentations be accompanied by relevant information that can help in clearly understanding these data such as looking at the details of cases at country level and England cases from a regional perspective.

Action: Secretariat/EFIG

10. Committee subgroups

Ad Hoc Group on *Campylobacter*

10.1 Prof O'Brien informed members that the above group had their fourth meeting on 25 November 2016 and are working towards presenting a draft version of their report to the full Committee at the June 2017 meeting.

Antimicrobial Resistance Working Group

10.2 Prof McDowell updated members on the activities of the above group. Members were informed that the Working Group last met on 30 November 2016. Issues they considered include: Role of WGS for AMR surveillance (The global transition from phenotypic to genotypic AMR surveillance – How do we get there?), Danish paper on LA-MRSA and possible implications for risk assessment (Evidence for Human Adaptation and Foodborne Transmission of LA-MRSA, FSA surveillance strategy on AMR, Update on the activities of DARC (Defra Antimicrobial Resistance Coordination) and the FSA's proposal to establish a short-term task on AMR.

Cross-SAC Working Group on the framework for foods that present an increased risk per serving

10.3 Dr Barker updated the Committee on the work of the above group set up in February 2016 to advise the FSA through advice to the FSA's Chief Scientific Adviser and Director of Policy, on a framework for the assessment of foods which may present an increased likelihood of harm. It was reported that the group delivered on its mandate by producing a revised framework for developing proportionate controls for risky foods which was presented to the FSA Board in November 2016[1].

10.4 Dr Barker highlighted the important revisions from the previous draft seen by the FSA Board which include: three clear criteria to identify risky foods for consideration using the framework and a new screening stage to assess whether a food should be assessed as a risky food using the framework (and if it not, what

[1] https://www.food.gov.uk/sites/default/files/fsa161107.pdf

other information or action is needed). Members noted that majority of the examples covered in the framework relates to microbiological risks. It was confirmed that this revised framework will be reviewed after two years and the trigger for review could be a recognised change in the number of cases of foodborne infections.

11. Any Other Business

11.1 The Chair informed members that the risk assessment on Zika virus and exposure via the food chain had been finalised by the Newly-Emerging Pathogens Working Group and had been provided as an information paper (ACM/1252).

11.2 The Chair informed members that John Coia was retiring from the Committee when his appointment ends on 31 March 2017 having served for 10 years. John had been a member of several subgroups, as well as chairing the Committee's Surveillance Working Group and the *Ad Hoc* Group on Eggs. She thanked him for all his hard work and commitment to the ACMSF, adding that after John retires from the Committee he has agreed to serve as a co-opted member on the expanded AMR subgroup.

12. Public Questions and Answers

12.1 The Chair invited members of the public to ask any questions or to comment on the work of the Committee.

12.2 Mr Steve Batchford from Sainsbury's raised a point on AMR surveillance. He mentioned a science report submitted in October last year on the subject of AMR which had prompted the headline that 65% of poultry contained ESBL *E. coli*, but leaving out the words "after enrichment" and in fact the countable levels were only 6.3%. The paper had reported that characterising the genes for resistance in poultry were CTXM-1 which were different from those found in the human population which were CTXM-15. He asked whether in future AMR surveillance the Committee considered it would be beneficial to do such molecular work.

12.3 In response Members agreed that there were advantages in having more information on organisms and although there were some issues with sharing data in open access databases, even having the sequences available with minimal identifiers allowed people to make associations. It was known that some large food companies are doing WGS to trace organisms through the supply chain and this was clearly a powerful tool, despite the challenges to commercial sensitivity in sharing such information.

12.4 Kaarin Goodburn from the Chilled Food Association and the Food and Biocide Industry Group asked if Members of ACMSF could engage with European contacts on the issue of biocides as currently there was a greater focus on chemical rather than microbiological safety. She said there had been difficulty getting understanding of the issues amongst other Member States. She also asked if the ACMSF could ask the FSA, Defra and other appropriate government bodies to set out the UK's future regulatory options to protect food hygiene in the light of the UK's exit from the EU.

12.5 The Chair said that it would be possible to find out what EFSA's BioHazard Panel was doing with regard to MRLs. It was suggested that PHE could raise the issue with ECDC because it was likely that sister organisations around Europe would have similar concerns. It was also mentioned that the issue was being discussed by ACNFP.

Annex 1

Members of the public attending the meeting

Alison Aitchison	Morrisons
Elizabeth Andoh Kesson	British Retail Consortium
Steve Batchford	Sainsburys
Fiona Brookes	2 Sisters
Bridgette Clarke	Bakkavor
Georgina Crayford	National Pig Association
Kaarin Goodburn	Chilled Food Association
Peter Littleton	Klenzan
Jacquelyn McCormick	Public Health England
Pamela Mullan	Moy Park
Eric Samuels	Pall
Karen Sims	Waitrose
Nicola Wilson	Westward Laboratories